FURKALO, N.K.

Comparative evaluation of arterial piezography in the diagnosis of therosclerosis. Vrach.delo no.1:1275-1279 D '58. (MIRA 12:3)

1. Kafedra terapii I (zav. - prof. D.F. Chebotarev) Kiyevskogo instituta usovershenstvovaniya vrachey.
(ARTERIOSCLEROSIS)

FURKALO, N.K.

Comparative evaluation of direct ballistocardiography in patients with atherosclerotic disorders of the cardiovascular system. Vrach.delo no.4:365-369 Ap '60. (MIRA 13:6)

1. Kafedra terapii (zav. - prof. D.F. Chebotarev) I Kiyevskogo instituta usovershenstvovaniya vrachey.
(BALLISTOCARDIOGRAPHY) (CARDIOVASCULAR SYSTEM--DISEASES)

FURKALO, N. K.

Cand Med Sci - (diss) "Comparative evaluation of the method of arterial piezography in diagnostics of aterosclerosis." Kiev, 1961. 16 pp; (Ministry of Public Health Ukrainian SSR, Kiev Order of Labor Red Banner Med Inst imeni Academician A. A. Bogomolets); 200 copies; price not given; (KL, 6-61 sup, 241)

FURKALO, N.K.

Hypercholesterinemia and its diagnostic significance in atherosclerosis. Vrach. delo no. 1:35-39 '61. (MIRA 14:4)

1. Kafedra terapii 1 (zav. - prof. D.F. Chebotarev) Kiyevskogo instituta usovershenstvovaniya vrachey.
(CHOLESTEROL) (ARTERIOSCLEROSIS)

FURKALO, N.K.

Evaluation of the method of direct ballistocardiography in patients with atherosclerotic lesions of the cardiovascular system. Terap. arkh. 32 no. 2:56-61 F '61. (MIRA 14:1)
(ARTERIOSCLEROSIS) (BALLISTOCARDIOGRAPHY)

FURKALO, N.K.

Late ventricular extrasystoles. Vrach. delo no.12:140-141 D '61.
(MIRA 15:1)

1. Kafedra terapii I (zaveduyushchiy - chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev)Kiyevskogo instituta usovershenstvovaniya vrachey.
(ARRHYTHMIA)

RADZIVIL, V.F., kand.med.nauk; KORKUSHKO, O.V., kand.med.nauk; FURKALO, N.K., kand.med.nauk

Treatment with procaine amide of some disorders of cardiac rhythm [with summary in English]. Vrach.delo no.9:43-47 S '62. (MIRA 15:8)

1. Kafedra terapii Kiyevskogo instituta usovershenstvovaniya vrachey.

(PROCAINE AMIDE) (ARRHYTHMIA)

FURKALO, N. K., kand. med. nauk

Evaluation of the velocity of the spreading of the pulse wave in patients with hypertension. Vrach. delo no.6:52-57 Je '62. (MIRA 15:7)

1. Kafedra terapii I (zav. - chlen-korrespondent AMN SSSR, prof. D. F. Chebotarev) Kiyevskogo instituta usovershenstvovaniya vrachey.

(HYPERTENSION) (PULSE)

KOGUT, M.D., dotsent; FURKALO, N.K., kand.med.nauk

Changes in the electrocardiogram in surgical interventions.
Vrach.delo no.12:81-87 D '62. (MIRA 15:12)

1. Kafedra terapii I (zav. - chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev) i kafedra khirurgii II (zav. - zasluzhennyy deyatel' nauki, prof. I.I.Kal'chenko) Kiyevskogo instituta usovershenstvovaniya vrachey.
(ELECTROCARDIOGRAPHY) (SURGERY, OPERATIVE)

FURKALO, N.K., kand.med.nauk; KOGUT,M.D., kand.med.nauk; FEDISHIN,P.S., kand.med.nauk; KORKUSHKO, O.V., kand.med.nauk; RADZIVIL, V.F., kand.med.nauk.

Clinical aspects of some temporal correlations in the ballisto-cardiogram. Vrach. delo no.4:30-36 Ap'63. (MIRA 16:7)

1. Kijevskiy institut usovershenstvovaniya vrachey; nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev.
(BALLISTOCARDIOGRAPHY)

TURKALO, N.K.; RADZIVIL, V.F.

Comparison of ophthalmoscopic data and the speed of the pulse wave spread in hypertension and atherosclerosis. Kardiologiia 4 no.3:75-76 My-Je '64. (MIRA 18:4)

1. 1-ya kafedra terapii (zav. - doktor med.nauk I.M.Gandzha) Kiyevskogo instituta usovershenstvovaniya vrachey.

FURKO, Milan, inz.

Experiences with the maintenance of safety equipment on the Bratislava airport. Letecky obzor 6 no.8:266 '62.

[redacted], D.

[redacted] in Slovenia in May, 1954. [redacted]

[redacted] vol. 20, 1954

Yugoslavia

[redacted] vol. [redacted], no. [redacted] Oct. 1956

[illegible]:

[illegible] Vujovic's [illegible] FNR Jugoslavije (Life [illegible] of Yugoslavia);
[illegible]

[illegible] Oct. 30, 1954

Yugoslavia

So: [illegible] vol. [illegible]

[illegible], D.

[illegible] (Climatology [illegible] of [illegible] Schools of Education); a review of [illegible]

[illegible] vol. [illegible], 1954

Yugoslavia

[illegible] Vol. 5, [illegible]

FURLAN, D.

FURIAN, D.

Snowfall in Slovenia February 11-15, 1952. p. 221. GEOGRAFSKI ZBORNIK.

ACTA GEOGRAPHICA. Ljubljana. Vol. 3, 1955

So. East European Accessions List Vol. 5, No. 9 September, 1956

FURLAN, D.

GEOGRAPHY & GEOLOGY

FURLAN, D. Vitol Manchin's Temelji teoreticne meteorologije in kliratologije (Fundamentals of Theoretical Meteorology and Climatology); a book review, p. 381. Vol. 27/28, 1955/56 (published 1957).

Monthly List of East European Accessions (EEAI) Vol. 11, No. 2.
April 1959 Unclass.

FURLAN, D.

Repartition of precipitations in Yugoslavia as a reflection of European "monsoon." p. 141

GEOGRAFSKI VESTNIK, (Geografsko drustvo v Ljubljani) Lujbljana, Yugoslavia. Vol. 29/30, 1957/58

Monthly List of East European Accessions (EEAI) LC Vol. 9, no. 2, Jan 1960

Uncl.

S/169/62/000/012/060/095
D228/D307

AUTHOR: Furlan, Danilo

TITLE: Precipitation in Slovenia

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 55-56, abstract 12J363 (Geogr. zb. Slov. akad. znan. in umetn. Razr. prirodosl. in med. vede, 6, 1961, 5-160 (Sloven.; summary in Eng.))

TEXT: The precipitation distribution in Slovenia is studied from data for 1925-1940. 124 maps are appended. The mountain barrier, stretching to the west of the republic at right angles to the direction of moist south-westerly winds, influence the yearly precipitation distribution. Away from the steep slopes of this barrier (Julian Alps and Snežnik - more than 3000 mm a year) the precipitation decreases sharply towards the coast (1000 mm). It also diminishes gradually eastwards (Prekmurje - 800 mm). On landward slopes of the barrier the topography only slightly influences the amount of precipitation, which, in the author's opinion, stems from the unsta-

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S/169/62/000/012/060/095
D228/D307

Precipitation in Slovenia

ble state of the atmosphere and from the advection of cold masses, as well as from the closeness of cyclonic centers. In winter, spring and autumn more precipitation falls in the coastal zone than is the case on the continental plain (Prekmurje). In summer more precipitation falls on the plain of Prekmurje than in the coastal zone, the approximate ratio being 7:4. The maps of the precipitation distribution in percentages of the yearly total show a maximum in the north of Slovenia in the cold season and one in the south in the remaining months. The number of dry months is greatest on the western mountain barrier (3 months - nearly the same as for Prekmurje). The greatest number of days with precipitation in the year is noted in the Julian Alps (170 days); by the sea, and also at Prekmurje, they exceed 100. The large number of days with feeble precipitation in May stems from the lower humidity of the atmosphere and from the stable stratification over land that is gradually becoming warmer. The average duration of the dry period is 125 days in the coastal zone and above 70 in the Julian Alps. Despite the fact that Slovenia is regarded as one of the wettest regions of Europe, the rainy periods (> 10 days) throughout the south-eastern half of the repub-

Card 2/3

S/169/62/000/012/060/095
D228/D307

Precipitation in Slovenia

lic contain on an average 5 days with precipitation, whereas in the Julian Alps rainy periods may contain more than 20 days. On the map of the annual precipitation variability the belt of relatively little change (up to 14%) passes away from the sea to almost as far as Maribor. Towards the Julian Alps the variability increases to 18%, and over the remaining territory it grows to 16%. A maximum daily precipitation of up to 300 mm falls on the western barrier. The author reckons that the time in which maximum precipitation develops in the Julian and Dinaric Alps depends on the annual displacement of the polar front and on incursions, associated with the position of the Azores high. In the cold season frontal and orographic precipitation falls on the major (south-western) half of Slovenia, but from May to September frontal precipitation falls chiefly in the north of Slovenia. According to the data for 1925-1940 the boundary between zones with autumn and summer precipitation maxima passes along the Mislinja and Paka Rivers, i.e. much further to the east than was previously supposed. 90 references.
[Abstracter's note: Complete translation]

Card 3/3

FURLAN, Joze, inz.

Capacitive effect of p-n junctions in the zone of avalanche ionization. Elektr vest 30 no.1/2:8-10 '62/'63.

1. Address: Fakulteta za elektrotehniko, Ljubljana.

FURLAN, J.

"Tunnel diodes" by M. Chmielewski. Reviewed by J. Furlan.
Elektr vest 30 no. 8/9:252 '62/'63.

IAMBIC, Ivan ; FURIAN, Milan [redacted]

Acute rheumatic myocardial changes in subacute bacterial endocarditis. Srpski arh. celok. lek. 85 no.5:604-608 Mar 57.

1. Interna klinika B Medicinskog fakulteta u Beogradu. Upravnik; Radivoj Berovic. Institut za patolosku anatomiju Medicinskog fakulteta u Beogradu. Upravnik: Marija Visnjic Frajnd.

(ENDOCARDITIS, SUBACUTE BACTERIAL, compl, rheum, changes of myocardium (Ser))

(MYOCARDIUM, in var. dis. acute rheum. changes in subacute bact. endocarditis (Ser))

FURIAN, M.; ANTONIJEVIC, M.; LEBEZ, D.

Paper-chromatographic analysis of the nitrogen compounds excreted by the livers of irradiated frogs. Bul sc Youg 7 no.1/2:12 F-Ap '62.

1. Institut "J. Stefan," Ljubljana.

*

JOVANOVIC, Vasilije; RADAKOVIC, Natalija; KOVACEVIC, Stojanka; MAJSTOROVIC, Branislav; FURLAN, Milan; ANDREJEVIC, Ljubica; STAMENKOVIC, Jela

A case of metrorrhagia complicated by acute renal failure following blood transfusion. Srpski arh. celok. lek. 92 no.10: 991-995 O '64.

1. Interno odeljenje Gradske bolnice u Beogradu (Nacelnik: prof. dr. Mihailo Andrejevic); Hirursko odeljenje Gradske bolnice u Beogradu (Nacelnik: prof. dr. Mitar Mitrovic); Biohemijski laboratorijum Gradske bolnice u Beogradu (V.d. sefa: dr. Mila milutinovic).

FURLAN, M.; ANTONIJEVIC, M.; LEPEZ, D.

Studies on the nitrogen metabolism in frog liver after whole-body irradiation. I. Neoplasma (Bratisl.) 12 no.5:479-487 '65.

1. Department of Radiobiology, Nuclear Institute "Jozef Stefan", Ljubljana, Yugoslavia. Submitted September 10, 1964.

FURLAN, Tomaz, Prim.dr.

Organization of the fight against tuberculosis. Tuberkuloza, Beogr. 6 no.5-6:253-259 Sept-Dec.'55.

1. Institut za tuberkulozu N R Slovenije--Golnik(direktor prim. dr. T. Furlan)
(TUBERCULOSIS, PULMONARY, prev. & control in Yugosl.,construction of sanatoria & clinics(Ser))

FURLAN Tomaz

FURLAN, Tomaz. Prim.dr.

No translation. Tuberkuloza Beogr. 6 no.5-6:317-320 Sept-Dec.'55.

1. Institut za tuberkulozu N R Slovenije--Golnik(direktor: prim dr. T. Furlan)
(COLLPASE THERAPY,
pneumonolysis, extra-musculo-periosteal (Ser))

FURLAN, Tomaz, Dr., Golnik

Tuberculosis after 8 years of tuberculostatic therapy.
Med. glasn. 10 no.11-12:442-447 Nov-Dec 56.

(TUBERCULOSIS, ther.
tuberculostatic (Ser))

EXCERPTA MEDICA Sec 15 Vol 13/1 Chest Dis. Jan 60

273. THE TREATMENT OF MAXIMAL LESIONS. I. EXTRAMUSCULOPERIOSTEAL COLLAPSE. II. ENDOCAVITARY ASPIRATION - Lečenje maksimalnih lezija. I. Ekstramuskuloperiostalni kolaps. II. Endokavitarna aspiracija - Furlan T., Korać B., Mešić J., Goldman S. and Fink N. Inst. za Tb L.R.S., Golnik - TUBERKULOZA 1958, 10/4 (187-192) and 10/5 (255-260)

I. In countries where there still are many patients with far advanced forms of pulmonary tb - as is the case in Yugoslavia too - resectional therapy cannot be considered the only surgical treatment of the disease. Besides resection the authors successfully make use of intra- as well as extrapleural, extramusculoperiosteal and thoracoplastic collapse. Between 1953 and the end of 1957, extramusculoperiosteal pneumolysis was performed in 98 patients. The aim of the operation is a three-fold one: (1) By reinforcing with layers of periosteum and intercostal muscles the wall of the operative cavity it is aimed: (a) to prevent pathogenic germs from getting through the pleura, and (b) to avoid the other main complication of extrapleural collapse - pulmonary fistulas. (2) By leaving the thoracic wall intact the authors wish to avoid loss of respiratory function. This cannot be done with thoracoplasty. (3) To make pneumonectomy unnecessary. In short the authors consider extramusculoperiosteal pneumolysis indicated whenever: (1) extrapleural collapse is contraindicated because of far advanced lesions, and (2) where there is an indication for thoracoplasty. Extramusculoperiosteal collapse is more effective than the collapse achieved with thoracoplasty; it preserves the respiratory capacity and is, during the first few weeks, still reversible. Further technical improvements of the operation and statistical data are reported.

II. Ever since World War II, endocavitary aspiration has been reserved in the Tuberculosis Hospital at Golnik for the most serious forms of pulmonary tb; several times it has been applied for symptomatic reasons as well as for study. Such an attitude is justified by the fact that cavitary drainage is not in the least harmful, as it remains, in the case of failure, without consequences. Endocavitary aspiration has never been performed as an independent operation in cases where collapse or resectional therapy was indicated. It is especially indicated in the case of bullous cavities with fluid level wherever they may be situated. In such cavities symptomatic success is rapidly obtained. Permanent success, however, is never certain unless in combination with collapse or resectional therapy. Since the war 89 endocavitary aspirations have been performed. Out of these 89

GOLDMAN,S.; LAVRIC,B.; FURIAN,T.; PAPO,I.; STUDIC,J.; BENEDIK,M.; CESTNIK,I.

Results of surgical therapy of pulmonary tuberculosis with special reference to pulmonary resection. Tuberkuloza,Beogr. 11 no.2:147-166 '59.
(PNEUMONECTOMY)

FURLAN, Tomaz; FINK, Leo

Generalized pneumocephalus ans a complication of extrapleural pneumothorax. Tuberkuloza, Beogr. 11 no.3:356-359 '59.

1. Bolnica za tuberkulozu, Golnik, direktor: prim. dr T. Furlan.
(PNEUMOTHORAX ARTIFICIAL compl.)
(BRAIN dis.)

FURLAN, T.

FURLAN, Tomaz; FINK, Leon

Therapy of maximum lesions. III. Pneumonectomy. Tuberkuloza, Beogr. 12 no.1:3-9 '60.

1. Bolnica za tuberkulozu, Golnik (direktor: dr. T. Furlan)
(PNEUMONECTOMY)

Fürle, František. Eine rationale Regelfläche sechsten Grades. Publ. Fac. Sci. Univ. Masaryk 1939, no. 274, 23 pp. (1939). (Czech. German summary)

The "hypopede" is defined as the quartic curve of intersection of a cylinder of radius a and a sphere of greater radius $a+b^2/a$ touching each other internally. These bisecants of the hypopede which meet the axis of the cylinder are found to generate a ruled surface of order 6 and class 6, which has a double curve of order 10 consisting of the hypopede, a strophoid and three straight lines. The line of striction of the ruled surface is found to be a twisted octavic entirely contained within a cylinder of radius $a/4$.

H. S. M. Coxeter (Notre Dame, Ind.).

Source: Mathematical Reviews, Vol 3, No. 2

SHILKO, M.O. [Shylko, M.O.], dotsent; FURLET, A.A., assistent

Treatment of weak labor with spherophysine. Ped., akush. i gin. 22 no.3:47-50 '60. (MIRA 14:4)

1. Kafedra akusherstva i ginekologii (zav. - dotsent M.O.Shilko) pediatricheskogo fakul'teta Krymskogo meditsinskogo instituta (direktor - dotsent S.I.Georgiyevskiy).
(LABOR (OBSTETRICS)) (SPHEROPHYSINE)

SHILKO, N.A., dotsent; FURLET, A.A., assistent; KALASHNIKOV, V.P., student VI kursa

Physiological condition of the uterus in women in early stages of the puerperium. Akush.i gin. 37 no.2:39-44 F '61. (MIRA 14:3)

1. Iz kafedry akusherstva i ginekologii (zav. - N.A. Shilko) pediatricheskogo fakul'teta Krymskogo meditsinskogo instituta.
(UTERUS) (PUERPERIUM)

FURLET, A.A., assistent

Effect of hemorrhages in labor and the early puerperium on the protein spectrum of the peripheral blood in puerperae. Ped., akush. i gin. 24 no.1:55-57'62. (MIRA 16:8)

1. Kafedra askusherstva i ginekologii pediatricheskogo fakul'teta (zav. - dotsent M.O.Shilko [Shylko]) Krymskogo meditsinskogo instituta (rektor- dotsent S.I.Georgiyevskiy [Heorhiiev'skiy, S.I.].

(HEMORRHAGE, UTERINE) (BLOOD PROTEINS)

ZAVRAZHIN, V.I.; FURLETOV, N.G.

Obtaining and use of gastric juice of horses on farms in Tambov Province. Veterinariia 41 no.2:67-70 F '64. (MIRA 17:12)

1. Direktor Tambovskoy oblastnoy veterinarnoy poliklinik (for Zavrazhin). 2. Glavnyy veterinarnyy vrach sovkhoza "Tambovskiy", Tambovskaya obl. (for Furletov).

FURMAGA, S., SMIRNOW, W.

"Jak zwalczad szkodliwe owady na wsi" (How to combat noxious insects in the country), by S. Furmaga, W. Smirnow. Reported in New Books (Nowe Ksiazki), No. 14, July 15, 1955

FURMAGA, Stefan (Lublin)

Helminthological fauna of field rodents and of predatory birds. Wiadomosci parazyt., Warsz. 2 no.5 Suppl:237-238 1956.

1. Zaklad Parazytologii i Chorob Inwazjnych WSR.
(HELMINTH INFECTIONS, epidemiology
in field rodents & predatory birds (Pol))
(BIRDS, diseases,
helminthiases in predatory birds, relation to infect. of field rodents (Pol))
(RODENTS, diseases,
helminthiases in field rodents, relation to infect. of predatory birds (Pol))

POLAND / Zooparasitology - Helminths. G-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 81722

Author : Furmaga, S.
Inst : Not given
Title : Holminthofauna of Field Rodents in Lyublin Environs

Orig Pub : Acta parasitol. polon., 1957, 5, No 1-12, 9-50

Abstract : In 1954-1955 687 rodents of 8 species were dissected: Apodomus agrarius, A. sylvaticus, A. flavicollis, Microtus arvalis, M. agrostis, M. raticops, M. subterraneus and Mus musculus. Holminths (16 species) were found in 279 rodents (41%); among these 1 species was identified in 35%, 2 species in 5.3%, 3 in 0.3%. Most infected were A. sylvaticus, A. flavicollis and M. musculus. Most prevalent were cestodes (Hymenolepis diminuta, Paranoplocephala brevis, Catenotaenia pusilla and others) and nematodes (Syphacia obvelata, Heligmosomum abborans, H.

Card 1/2

POLAND / Zooparasitology - Holminths. G-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 81722

polygyrum and Trichocephalus muris). Extent of invasion is highest in April-June and in the beginning of winter. No strict specificity of holminths to a definite host species was found. Holminths Longistriata bota, Hel. aberrans, Hel. skrjabini and Hel. polygyrum are identified on Polish territory for the first time. Hym. diminuta, Hel. polygyrum, T. muris and Ganguloterakis spumosa are found in A. agrarius for the first time. There is a description of the parasites found and the circle of their hosts is indicated. Author's abstract.

Card 2/2

FURMAGA, Stefan

Endoparasites in mole (Talpa europaea L.) in the Lublin region. Wiadomosci parazyt., Warsz. 4 no.5-6:695; Engl. transl. 696 1958.

1. Z Zakladu Parazytologii i Chor. Inw. WSR w Lublinie.
(HELMINTH INFECTIONS,
in males (Pol))
(ANIMALS, dis.
moles, helminth infect. (Pol))

BEZUBIK, Bernard; FURMAGA, Stefan

The parasites in Macacus cynomolgus L. from Indonesia. Acta parasit 8 no.8/20:335-344 Je '60. (ERAI 9:11)

1. Katedra Parazytologii W.S.R. Lublin.
(Helminths)
(Indonesia--Macacus cynomolgus)

FURMAGA, Stefan

Materials to the helminth fauna of hedge-hogs Erinaceus roumanicus Barrett-Hamilton. Acta parasit Pol 9 no.22/30:441-445 '61.

1. Department of Parasitology and Parasitic Diseases, Agricultural College of Lublin. Head: Docent, dr. Eugeniusz Zarnowski. Author's address: Katedra Parazytologii Wyzszej Szkoly Rolniczej, Lublin, Akademicka 11.

FURMAGA, Stefan

Histochemical investigations of the liver in the course of experimental fascioliasis in rabbits. Acta parasit Pol 11 no.1/4:49-76 '63.

1. Department of Parasitology, Agricultural University College, Lublin, Head: prof. dr Eugeniusz Zarnowski.

BEZUBIK, Bernard; FURMAGA, Stefan

Some observations on Setaria equina (Abildgaard, 1789).
Acta parasit Pol 12 no.1/12:1-5 '64.

1. Zoological Institute, University, Warsaw (for Bezubik).
2. Department of Parasitology, College of Agriculture, Lublin
Head: Prof. Dr Eugeniusz Zarnowski (for Furmaga).

FURMAGA, Stefan

Observations on Setaria cervi (Rudolphi, 1819). Acta parasit Pol 1/12:7-12 '64.

1. Department of Parasitology, College of Agriculture, Lublin. Head:Prof. Dr Eugeniusz Zarnowski.

FURMAN, A.

5,500 competitors. Za bezop.dvizh. 4 no.4:5 Ap '62. (MIRA 15:5)
(Traffic safety--Competition)

UDC 621.302-67

ACC NR: AP6019556 (A) SOURCE CODE: UR/0416/66/000/001/0061/0063

AUTHOR: Furman, A. (Major)

ORG: none

TITLE: Railway transportation of equipment

SOURCE: Tyl i snabzh sov vooruzh sil, no. 1, 1966, 61-63

TOPIC TAGS: transportation system, railway transportation, tracked vehicle

ABSTRACT: In this article practical advice is given for the transportation of certain four-axle machines and units mounted on one-axle tractors which are to be moved on railroad flatcars. The loading, placement, and fastening of four-axle armored carriers and a crane unit mounted on a one-axle tractor on a four-axle flatcar are described in detail. Orig. art. has: 2 figures.

SUB CODE: 13,15/ SUBM DATE: none

Card 1/1

L 08951-67

ACC NR: AP6030098 (A) SOURCE CODE: UR/0317/66/000/008/0056/0057

AUTHOR: Furman, A. (Major) 8

ORG: none

TITLE: Motor vehicle entraining

SOURCE: Tekhnika i vooruzheniye, no. 8, 1966, 56-57

TOPIC TAGS: railway transportation, cargo truck

ABSTRACT: This article describes the "inclined" method of loading empty platform trucks onto flatcars and the rules to be followed when using this technique, e.g., the fuel tank is filled to only one-third capacity. The use of this method of loading reduces rolling stock requirements and shipping costs by an average of 40 to 50%. Orig. art. has: 1 figure and 1 table. [WS]

SUB CODE: 13, 15/ SUBM DATE: none/

Card 1/1 nat

FURMAN, A.

More energy and initiative. Za bezop.dvizh. 4 no.1:4-5 Ja '62. (MIRA 16:7)
(Traffic safety)

FURMAN, A.A.

Solubility of water in chlorobenzene and ethylbenzene. T. S. Filippov and A. A. Furman. *J. Appl. Chem. U.S.S.R.* 25, 695-7(1952).—An app. consisting of a sealed ampul contg. the sample, in a bath with accurate temp. control, is described for detg. the reciprocal soly. of liquids. The soly. of H_2O in ethylbenzene and in chlorobenzene is given for the temp. range 17.7°–40.3°. Bernard Rubin

5(1),5(2)

AUTHORS: Martynov, Yu. M., Yakimenko, L. M., Furman, A. A., Matveyev, M. A. SOV/64-58-7-9/18

TITLE: The Technology of the Production and Use of Magnesium Chlorate for Defoliation (Tekhnologiya proizvodstva i primeneniye khlorat-magniyevykh defoliantov)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 7, pp 420-423 (USSR)

ABSTRACT: Mainly calcium cyanamide is used for artificial defoliation. In the cotton districts of the USSR irregular results were, however, obtained as the use of this substance depends on certain meteorological conditions. Among several preparations investigated the best results were obtained with magnesium chlorate. A comparative table of the experimental results with calcium cyanamide and magnesium chlorate for defoliation of cotton plants demonstrates that the effect of magnesium chlorate depends to a much lesser degree on temperature and meteorological conditions. The production possibilities of magnesium chlorate were studied, and it was found that favorable results are obtained after the reaction $2\,NaClO_3 + MgCl_2 \rightarrow Mg(ClO_3)_2 + 2NaCl$

Card 1/2

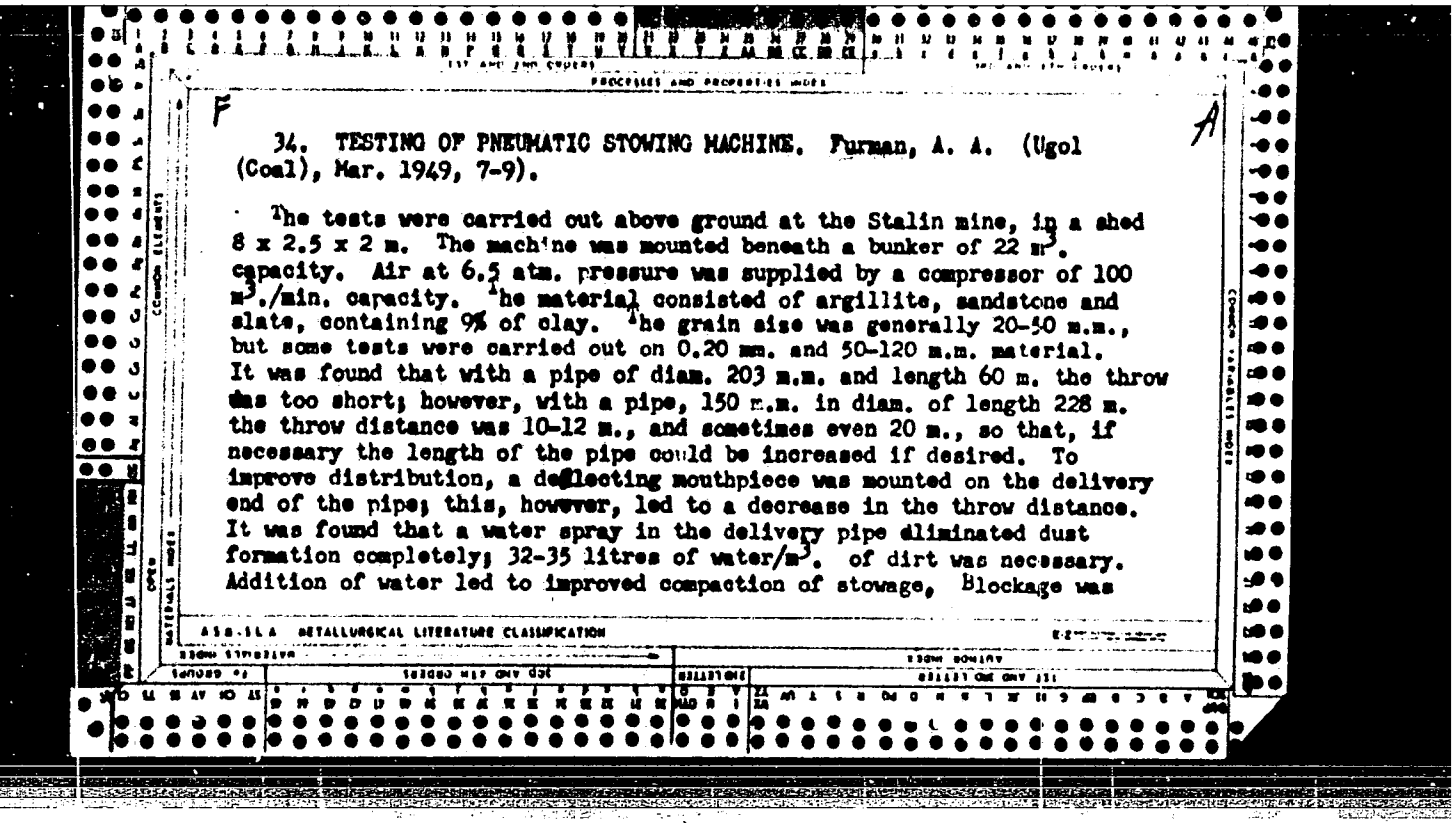
if carried out in acetone. The purity of the product obtained depends on the amount of water present in the $MgCl_2$. A further method that already can be used industrially consists in the fact that sodium chlorate is added to the fused $MgCl_2 \cdot 6H_2O$ (Ref 12); thus a solid crystalline product is obtained. The temperature is maintained at 110-120° and special melting crucibles are used. To obtain a reaction product with a minimum melting-point of 45° the ratio between magnesium chloride and sodium chlorate must be 1.3 - 1.4 . To produce one ton with 58% $Mg(ClO_3)_2 \cdot 6H_2O$ 0.44 tons of sodium chlorate and 0.56 tons of $MgCl_2 \cdot 6H_2O$ are required.

There are 2 figures, 4 tables, and 12 references, 3 of which are Soviet.

NETYKSA, M., podpolkovnik; FURMAN, A., mayor

Convenient and safe. Voen.vest. 42 no.5:112-114 My '62.
(MIRA 15:11)

(Vehicles, Military--Transportation)



F

A

34. TESTING OF PNEUMATIC STOWING MACHINE. Furman, A. A. (Ugol (Coal), Mar. 1949, 7-9).

The tests were carried out above ground at the Stalin mine, in a shed 8 x 2.5 x 2 m. The machine was mounted beneath a bunker of 22 m^3. capacity. Air at 6.5 atm. pressure was supplied by a compressor of 100 m^3./min. capacity. The material consisted of argillite, sandstone and slate, containing 9% of clay. The grain size was generally 20-50 m.m., but some tests were carried out on 0.20 mm. and 50-120 m.m. material. It was found that with a pipe of diam. 203 m.m. and length 60 m. the throw was too short; however, with a pipe, 150 m.m. in diam. of length 228 m. the throw distance was 10-12 m., and sometimes even 20 m., so that, if necessary the length of the pipe could be increased if desired. To improve distribution, a deflecting mouthpiece was mounted on the delivery end of the pipe; this, however, led to a decrease in the throw distance. It was found that a water spray in the delivery pipe eliminated dust formation completely; 32-35 litres of water/m^3. of dirt was necessary. Addition of water led to improved compaction of stowage. Blockage was

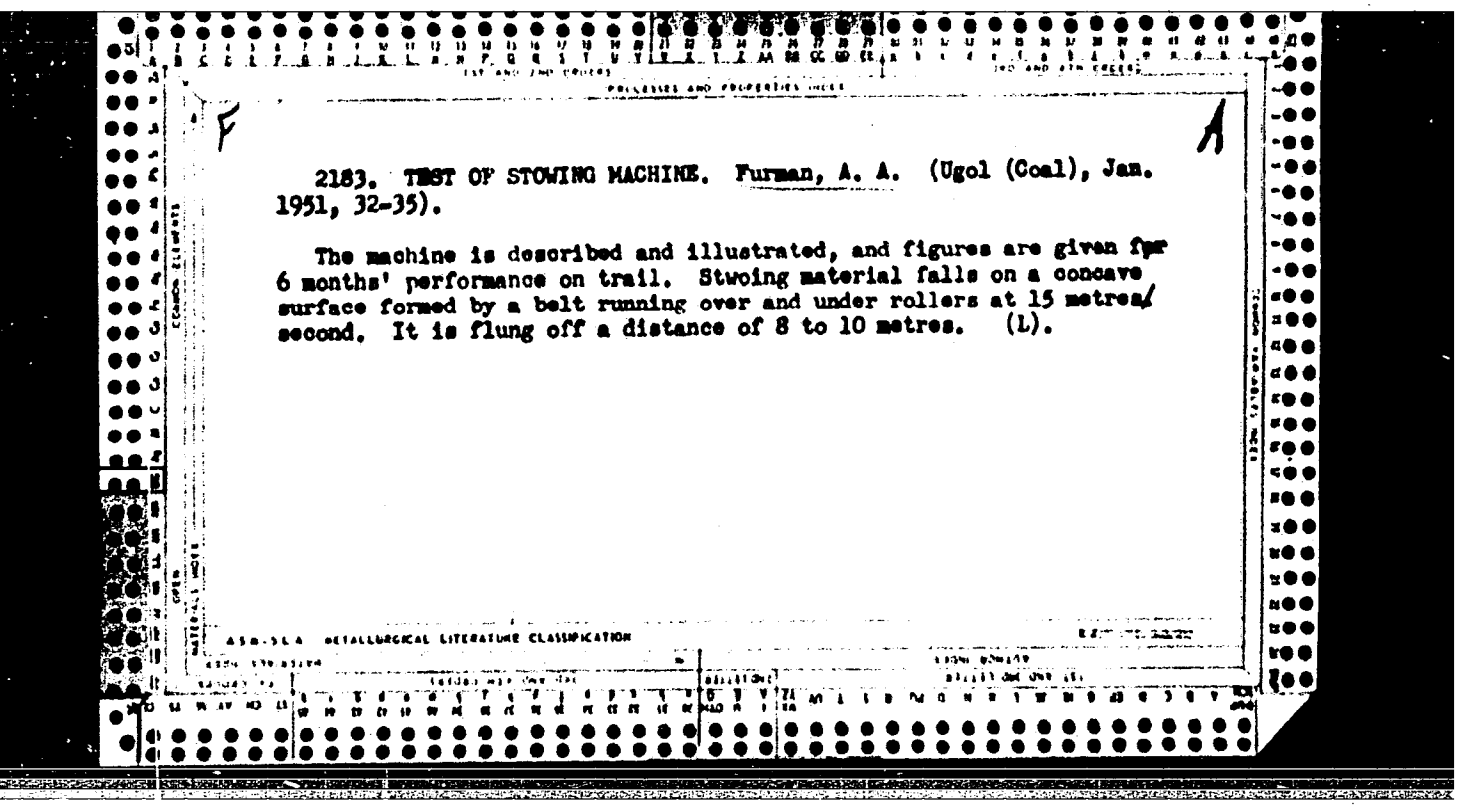
at a minimum when the 20-50 m.m. material was used. Clay content should not exceed 0010 per cent. With a pressure of 2.2-2.5 atm. in the stowing pipe and 4.5-5.5 atm. at the feeding wheel the rate of delivery was 22-23 m^3/ hr. Air consumption was 230 m^3. per 1 m^3. of stowage. To obtain full efficiency from the feeding wheel a pressure of 7 atm. would be necessary. The feeding wheel should be redesigned for a power pressure.

FURMAN, A. A.

"Tests with MZ-1 Backfilling Machine Prove Effective", Ugol', No. 1, 1951.

SO: W-17881, 26, Apr 1951

4820. RESULTS OF TRIALS OF PNEUMATIC STOWING MACHINE. Furman, A.A. (Mgol (Coal), Sept. 1951, 24-26). Data on the machine and its preformance are given with drawings of the layout in a mine and of piping. (E).



F

A

2183. TEST OF STOWING MACHINE. Furman, A. A. (Ugol (Coal), Jan. 1951, 32-35).

The machine is described and illustrated, and figures are given for 6 months' performance on trail. Stwoing material falls on a concave surface formed by a belt running over and under rollers at 15 metres/second. It is flung off a distance of 8 to 10 metres. (L).

1. FUHMAN, A.A.
2. USSR (600)
4. Coal-Mining Machinery
7. Results of testing the KZL-lu light filler conveyor, Ugol' 28 no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

FURMAN, A.A.

4217. NEW [illegible] PNEUMATIC STOWING MACHINE. Furman, A.A. and Filipenko, I.F. (Ugol (Coal, Moscow), July 1957, [illegible]). An illustrated description is given of a machine which has proved successful in Kuzbass. The loading hopper leads into a series of seven revolving chambers, like an enlarged version of the chambers of a revolver, which transfer the stowing material to the stowing pipe. The machine has an output of 100 cu.m/h and takes up little space. (L).

FURMAN, Aleksey Alekseyevich; IVANOV, A.Ye., otv.red.; KOROLEVA, T.I., red.izd-va; ALADOVA, Ye.I., tekhn.red.

[Fill stowing] Zakladka vyrabotannogo prostranstva. Moskva, Ugletekhizdat, 1958. 229 p. (MIRA 12:2)
(Mine filling)

Furman, A. A.

ALEKSANDROV, B.F., inzh.; BALYKOV, V.M., inzh.; BARANOVSKIY, F.I., inzh.; BOGUTSKIY, N.V., inzh.; BUN'KO, V.A., kand.tekhn.nauk, dotsent; VAVILOV, V.V., inzh.; VOLOTKOVSKIY, S.A., prof., doktor tekhn.nauk; GRIGOR'YEV, L.Ya., inzh.; GRIDIN, A.D., inzh.; ZARMAN, L.N., inzh.; KOVALEV, P.F., kand.tekhn.nauk; KUZNETSOV, B.A., kand.tekhn.nauk, dotsent; KUSNITSYN, G.I., inzh.; LATYSHEV, A.F., inzh.; LEYBOV, R.M., doktor tekhn.nauk, prof.; LEYTES, Z.M., inzh.; LISITSYN, A.A., inzh.; LOKHANIN, K.A., inzh.; LYUBIMOV, B.N., inzh.; MASHKEVICH, K.S., inzh.; MALKHAS'YAN, R.V.; MILOSERDIN, M.M., inzh.; MITNIK, V.B., kand.tekhn.nauk; MIKHEYEV, Yu.A., inzh.; PARAMONOV, V.I., inzh.; ROMANOVSKIY, Yu.G., inzh.; RUBINOVICH, Ye.Ye., inzh.; SAMOYLYUK, N.D., kand.tekhn.nauk; SMEKHOV, V.K., inzh.; SMOLDYREV, A.Ye., kand.tekhn.nauk; SNAGIN, V.T., inzh.; SNAGOVSKIY, Ye.S., kand.tekhn.nauk; FEYGIN, L.M., inzh.; FRENKEL', B.B., inzh.; FURMAN, A.A., inzh.; KHORIN, V.N., dotsent, kand.tekhn.nauk; CHETVEROV, B.M., inzh.; CHUGUNIKHIN, S.I., inzh.; SHEIKOVNIKOV, V.N., inzh.; SHIRYAYEV, B.M., inzh.; SHISHKIN, N.F., kand.tekhn.nauk; SHPIL'BERG, I.L., inzh.; SHORIN, V.G., dotsent, kand.tekhn.nauk; SHTOKMAN, I.G., doktor tekhn.nauk; SHURIS, N.A., inzh.; TERPIGOREV, A.M., glavnyy red.; TOPCHIYEV, A.V., otv.red.toma; LIVSHITS, I.I., zamestitel' otv.red.; ABRAMOV, V.I., red.; LADYGIN, A.M., red.; MOROZOV, R.N., red.; OZERNOY, M.I., red.; SPIVAKOVSKIY, A.O., red.; FAYBISOVICH, I.L., red.; ARKHANGEL'SKIY, A.S., inzh., red.;

(Continued on next card)

ALEKSANDROV, B.F.---(continued) Card 2.

BELYAYEV, V.S., inzh., red.; BUKHANOVA, L.I., inzh., red.; VLASOV, V.M., inzh., red.; GLADILIN, L.V., prof., doktor tekhn.nauk, red.; GREBTSOV, N.V., inzh., red.; GRECHISHKIN, F.G., inzh., red.; GONCHAREVICH, I.F., kand.tekhn.nauk, red.; GUDALOV, V.P., kand.tekhn. nauk, red.; IGNATOV, N.N., inzh., red.; LOMAKIN, S.M., dotsent, kand. tekhn.nauk, red.; MARTYNOV, M.V., dotsent, kand.tekhn.nauk, red.; POVOLOTSKIY, I.A., inzh., red.; SVETLICHNYY, P.L., inzh., red.;SAL'-TSEVICH, L.A., kand.tekhn.nauk, red.; SPERANTOV, A.V., kand.tekhn. nauk, red.; SHETLER, G.A., inzh., red.; ABARBARCHUK, F.I., red.izd-va; PROZOROVSKAYA, V.L., tekhn.red.; KONDRAT'YEVA, M.A., tekhn.red.

[Mining; an encyclopedic handbook] Gornoe delo; entsiklopedicheskii spravochnik. Glav.red.A.M.Terpigorev. Chleny glav.redaktsii A.I. Baranov i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu. Vol.7. [Mining machinery] Gornye mashiny. Redkol.toma A.V.Topchiev i dr. 1959. 638 p. (Mining machinery) (MIRA 13:1)

FURMAN, A. A. Cand Tech Sci -- (diss) "Study of the working process, and methods of ~~calculating~~ designing pneumatic [foundation-] laying machines of the chamber type." Novosibirsk, 1959. 16 pp with illustrations (Min of Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst im S. M. Kirov), 150 copies (KL, 49-59, 141)

FURMAN, A.A.

Automatic valve with a ZDU1 (ZDU2) hydraulic remote control system.
Ugol' 34 no.12:27-28 D '59. (MIRA 13:4)

1. Kuznetskiy filial Giprouglemasha.
(Hydraulic mining) (Remote control)

FURMAN, A.A.

Method for designing pneumatic packers. Izv.Sib.otd. AN SSSR no.4:17-27 '61. (MIRA 14:6)

1. Sibgiprogormash, Novosibirsk.
(Mining machinery)
(Pneumatic machinery)

FURMAN, A.A., kand. tekhn. nauk

New designs of the units of overhead pushing conveyors. Vest. Mashinostr. 43 no.6:42-43 Je '63. (MIRA 16:7)

(Conveying machinery)

L 44015-66 EWT(d)/EWT(m)/EWP(t)/ETI/EWP(h)/EWP(l) IJP(c) JD

ACC NR: AP6015122 (N) SOURCE CODE: UR/0064/66/000/005/0042/0044

AUTHOR: Furman, A. A.; Lavrova, V. B.

36
B

ORG: none

TITLE: Commercial production of titanium trichloride

SOURCE: Khimicheskaya promyshlennost', no. 5, 1966, 42-44

TOPIC TAGS: titanium compound, ~~chloride~~, chemical reduction, silicon, ~~propylene, polymerization~~, polymerization catalyst, TRICHLORIDE

ABSTRACT: Conditions for reduction of titanium tetrachloride with silicon to form titanium trichloride were studied in the laboratory and translated to pilot operations. $TiCl_4$ vapors are passed through a reactor (900-1000°C) containing a silicon column. The product vapor mixture is cooled to 150-300°C to condense $TiCl_3$, then cooled further to condense $SiCl_4$ and $TiCl_4$. This mixture is distilled and the $TiCl_4$ is recycled. Product $TiCl_3$ is ground and the 5-8% of adsorbed $TiCl_4$ is evaporated under vacuum, giving a 98-99% pure $TiCl_3$ containing less than 0.5% $TiCl_4$ and less than 1% insoluble impurities. Optimum $TiCl_4$ feed rate through the laboratory 120 mm Si column is in the 48.5-125 $cm^3/(cm^2 \cdot min)$ range. Increasing contact time did not increase conversion

Card 1/2 UDC: 661.882.321

L 44015-66

ACC NR: AP6015122 O

above about 17% $TiCl_4$. The system is operated under an oxygen- and moisture-free inert atmosphere. One commercial installation is already in operation. The product $TiCl_3$ is usable as a catalyst for olefin polymerization, especially for production of polypropylene. Orig. art. has: 3 tables, 1 figure and 3 equations.

SUB CODE: 07, 11, 13/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 010

Card 2/2 LC

RABOVSKIY, B.G.; KOGAN, V.M.; FURMAN, A.A. (Moscow)

Possibility of applying a differential thermal method for studying the kinetics of chemical reactions. Zhur. fiz. khim. 38 no.12:2895-2898 D '64. (MIRA 18:4)

FURMAN, A.A., kand. tekhn. nauk (Novosibirsk)

Hardening pipe by high-frequency currents. Trudy VNIIGidrouglia no.4:86-92 '64. (MIRA 18:3)

Furmanov, M. G.

KUDRENKO, V.A., inzhener; MIRONOV, S.A., inzhener; FURMANOV, M.G., inzhener.

Double-deck transport of automobiles. Zhel.dor.transp. 39 no.7:71 Jl '57. (MLRA 10:8)
(Automobiles--Transportation)

L 02009-67 EWT(d)/EWP(h)/EWP(l)

ACC NR: AM6006729 (A) Monograph UR/

20
B+1

Furman, Anatoliy Georgiyevich (Major)

Transportation of military echelons by railroad 14 (Perevozka voinskogo eshelona po zheleznoy doroge) Moscow, Voyenizdat M-va obor. SSSR, 65. 0122 p. illus. 4,000 copies printed.

TOPIC TAGS: ground force organization, railway transportation, training

PURPOSE AND COVERAGE: The aim of this book is to help officers, seargents and commanders of all military ranks in successful organization and execution of transportation of military subdivision, troups and echelons by railroad. This book can be used as a handbook by officers, who study the rules of military transportation by railroad.

TABLE OF CONTENTS (abridged):

SUB CODE: 15 / SUBM DATE: 29Mar65/

Card 1/1 nsl

ACC NR: AP6024386 SOURCE CODE: UR/0050/66/000/007/0052/0054

AUTHOR: Prikhot'ko, G. F. (Doctor of geographical sciences); Furman, A. I.

ORG: Ukrainian Scientific Research Hydrometeorological Institute (Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut)

TITLE: Experimental meteorological polygon [controlled test area]

SOURCE: Meteorologiya i gidrologiya, no. 7, 1966, 52-54

TOPIC TAGS: meteorological ~~test area~~ instrument, climate control, ~~weather modification~~, fog, ~~dispersion~~, cloud seeding, atmospheric physics, ~~laboratory~~, atmospherics, ~~boundary layer~~, ~~meteorological aircraft~~, ~~radar~~, meteorology, ~~cloud microphysics~~ meteorologic research facility, radar observation, atmosphere precipitation

ABSTRACT: An experimental meteorological polygon [control test area] has been established in the Ukraine to determine whether weather modification techniques can be used successfully to induce precipitation over flat steppe terrain. The test area consists of two 75 x 50-km polygons (3750 km^2 each), spaced 30 km apart and arranged along an east-west line (see Fig. 1). Cloud-seeding experiments are carried out over the eastern (experimental) area. Only natural precipitation is measured in the western (control) area. Regular meteorological

Card 1/4 UDC: 551.50

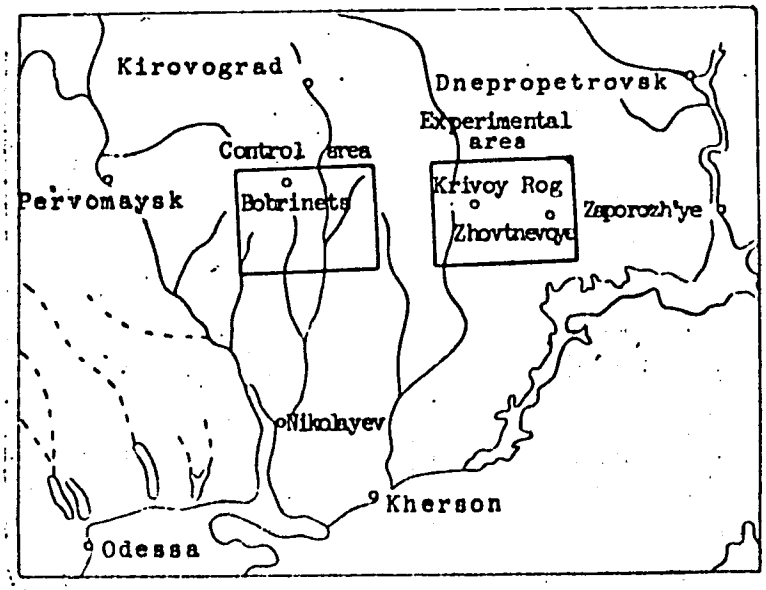


Fig. 1. Schematic showing position of the experimental meteorological polygon of the Ukrainian Scientific Research Hydrometeorological Institute.

stations in the test area are located at Krivoy Rog (also an aerological station), Zhovtnevoye, Loshkarevka, and Bobrinets, each station servicing

about 10—11 km^2. "Pluviographs" (currently numbering 255, each servicing an area of 15 km^2) have been installed in a regular pattern over the test area to record the time precipitation begins and ends and rainfall amounts. A denser network of these instruments has been established in the center of the experimental area for use in analyzing and evaluating radar methods of precipitation measurements. There are "precipitation gages" at all "pluviograph" stations, and at the remaining stations, "precipitation gages" and rain gages. In winter, snow stakes are set up at all observation stations (observations made twice a day at 0800 and 2000 hr Moscow time). One of the tasks of the Laboratory of the Physics of the Surface Boundary Layer of the Atmosphere located in the village of Zhovtnevoye (experimental area) is to study natural and artificially induced precipitation. This laboratory has a number of groups specializing in various types of observations. One of these groups works on radar studies (cm- and m-range radar). Another group carries out captive balloon studies in the lower 500-m layer of the atmosphere. Specialized actinometric, gradient, and other observations are made by a meteorological group. The polygons are administered from Dnepropetrovsk, which is the base for a group of flyers operating two IL-14 aircraft specially equipped with meteorological instruments. Another group here analyzes and processes the data, and still another is responsible for network inspection functions. Aircraft meteorological instrumentation includes electrical recorders for

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000513910013-8"

ACC NR: AP6024386

registering meteorological measurements, instruments for studying the microphysical characteristics of clouds, and equipment for seeding clouds with solid and liquid reagents. At present the Experimental Meteorological Polygon has the capability of solving not only weather-modification problems but other pressing meteorological tasks as well. Agrometeorological research is already well advanced, and problems on the determination of the weather—harvest interrelationship are being implemented. Present plans call for a number of mesometeorological studies to be started soon. Orig. art. has: 1 figure. [ER]

SUB CODE: 04/ SUBM.DATE: 01Mar66/ ORIG REF: 001/ OTH REF: 001
ATD PRESS: 5043

Card 4/4

PINSKIY, O.Yu. [Pins'kyi, O.IU.]; FURMAN, A.L.

Use of diaphragm switches in pneumatic conveying systems. Leh.prom. no.2865-66 Ap-Je '65. (MIRA 18:10)

FURMAN, A.M.

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6-23-57

Nuclear Science Abstracts
Vol. 8 No. 4
Feb. 28, 1954
Physics

1139
THE MECHANISM OF THE ELECTRIFICATION OF ARTIFICIAL AEROSOLS (SMOKES). A. M. Furman. Translated from Zhur. Tekh. Fiz. 17, 111-14(1947). 6p. (AEC-tr-685)
A mechanism is presented for the electrification of artificial aerosols, based on the assumption that the charging of an aero-dispersed system formed at high temperatures is connected with the phenomenon of thermionic emission. (C.H.)

FURMAN, A. M.

USSR/Physics - Static, Radio Electrons

Aug 50

"Possibility of Extracting Electrons From Metals by Molecules of a Neutral Gas With Electronegative Properties," S. V. Izmaylov, A. M. Furman, Cen Lab in Struggle Against Industrial Radio Interference, Min of Elec Ind USSR

"Zhur Eksper i Teoret Fiz" Vol XX, No 8, pp 729-733

Shows nonexcited subject molecules can extract electrons from a metal. Calculates number of electrons extracted by one molecule incident normally upon metal's surface with velocity V as function of molecule's polarizability alpha and minimum distance x_0 from surface characterizing repulsive force. Submitted 27 Jan 50.

PA 165T113

FURMAN, A.M.

AUTHOR: FURMAN, A.M. 56-6-55/56

TITLE: On the Removal of Electrons from Metals by means of Fast Molecules. (O vyryvanii elektronov iz metalla bystrymi molekulami, Russian)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 6, pp 1591 - 1593 (U.S.S.R.)

ABSTRACT: Theoretically it is shown that the mechanism of the "potential" removal of electrons from metals by the molecules of a neutral gas is explainable only if the energy of gas molecules is high enough to be able to approach the metal up to a distance of x_o. For x_o the following relation is true:

$$x_o = (2B/mv_\infty^2)^{1/p}$$

where for the constants B and p possibilities for computation are given. The following practical example is given: I O_2-molecules pass with v_∞ = 4 km/sec over Fe, a certain ionization begins to develop already at this velocity. At v_∞ = 10 km/sec nearly all O_2-molecules touching the Fe-surface are ionized.

Card 1/2

56-6-55/56

On the Removal of Electrons from Metals by means of Fast Molecules.

(With 1 table, 1 illustration, and 2 Slavic References)

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 28.8.1956
AVAILABLE: Library of Congress
Card 2/2

LIMANOV, Ye.A.; FURMAN, A.M.

Device for measuring the temperature of the anode of mercury valves. Izv. NIIPT no.4:114-121 '59. (MIRA 13:2)
(Temperature--Measurement)
(Electric current rectifiers)

81845

S/033/60/037/03/014/027
E032/E314

3.9000

AUTHOR: Furman, A.M.

TITLE: On the Theory of the Ionisation of Meteor Trails. I. Kinetics of the Variation in the Ionisation Parameters of Meteor Bodies During Their Passage Through the Earth's Atmosphere

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 3, pp 517 - 525 (USSR)

ABSTRACT: It is shown that the ionisation parameters, i.e. the electron and positive ion work functions, the atomic ionisation potential and the probability of evaporation of a neutral atom from a meteor body vary as it heats up during its motion through the Earth's atmosphere and as its fractions with the lowest boiling point evaporate. The oxides of alkali and rare-earth metals contained in stony and iron-stony meteors ensure the low values of the electron and positive ion work functions. As a result of the process of continuous ejection of particles from the surface of the meteor by the gas molecules flowing in the opposite direction (which excludes the formation of space charges), and also due to the emission of charged particles of either

Card1/2

81845

S/033/60/037/03/014/027
E032/E314

On the Theory of the Ionisation of Meteor Trails. I. Kinetics of the Variation in the Ionisation Parameters of Meteor Bodies During Their Passage Through the Earth's Atmosphere

sign, a dynamic equilibrium is set up between the emission intensities of electrons and positive ions. This leads to an equality between the positive ion and the electron work functions. A calculation of the equilibrium work functions shows that the existing theories of ionisation of meteor trails as reviewed by Herlofson in Ref 1 must be reconsidered. A detailed account of this will be given in a future issue of the present journal. Acknowledgment is made to Professor V.V. Fedynskiy for valuable advice. There are 5 tables and 18 references, 6 of which are English, 1 French and 11 are Soviet.

SUBMITTED: March 20, 1959

Card 2/2

9.9600 1327 1041

83234

S/033/60/037/004/010/012

E032/E314

AUTHOR: Furman, A.M.

TITLE: Theory of Ionisation of Meteor Trails. II. The Role of Ionising Phenomena on the Surface of the Meteor Body

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol. 37, No. 4, pp 746 - 752

TEXT: In a previous paper* (Ref 8), the author showed that as the temperature of the meteor body increases, the electron and positive-ion work functions will change as a result of the evaporation of alkali and rare-earth metals and also the charging up of the meteor body. As a result of the latter effect, a dynamic equilibrium is set up between the intensities of the electron and the positive-ion emissions. This, in turn, favours a considerable increase in the work functions for charged particles of either sign. Moreover, in the case of stony and iron-stony meteors, the presence of oxides of alkali and alkali rare-earth metals ensures that the equilibrium values of the work function are relatively low up to 3 200 °K. This theory is extended in the present paper and it is shown that for a "typical" meteor with

Card 1/3

* Astronomicheskiy zhurnal, 1960, Vol. 37, No. 3, pp 517-525 (USSR)

Theory of Ionisation of Meteor Trails. II. The Role of Ionising Phenomena on the Surface of the Meteor Body

$V = 4 \times 10^6$ cm/sec, $r = 0.8$ mm and $S = 8.05 \times 10^{-2}$ cm^2 the linear ionisation density of the meteor trail is $2 \times 10^{-8}\, n(T)$, where $n(T)$ is the intensity of electron-ion emission per sec per cm^2. Below 1000 °K alkali and alkali rare-earth impurities ensure electron and ion emission, giving rise to a linear ionisation comparable with and exceeding 10^{12} electrons/cm. Thus, for $T = 750$ °K, the common work function $\varphi = 1$ eV and the linear ionisation density is 1.68×10^{13} electrons and ions per cm of trail. For $T = 3000$ °K, $S = 8.05 \times 10^{-2}$ cm^2 and $\varphi = 2$ eV, the linear density is found to be 2.4×10^{16} electrons and ions per cm of trail. This exceeds by four orders of magnitude the values given by Herlofson in Ref. 1. Thus the contribution due to thermionic emission must be looked upon as appreciable. Another effect considered in the present paper is the ejection of

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83234
S/033/60/037/04/010/012
E032/E314

Theory of Ionisation of Meteor Trails. II. The Role of Ionising Phenomena on the Surface of the Meteor Body

electrons, ions and neutral atoms from the meteor by collision with air molecules. It is shown that this effect can ensure sufficient linear ionisation to give rise to a radio echo. In a "typical" case, the value of this ionisation is found to be between 2×10^{12} and 5×10^{12} ions per cm of trail. Finally, it is shown that the "potential ejection" of electrons also gives rise to linear density of ionisation capable of producing a radio echo (in a "typical case" this is found to be 6×10^{13} ions per cm of trail). There are 4 tables and 17 references: 1 German, 7 English and 9 Soviet.

SUBMITTED: March 20, 1959

Card 3/3

FURMAN, A. M.

Distribution of light and medium ions in the atmosphere by their mobility and concentration. Trudy GGO no.97:106-116 '60.
(MIRA 13:8)

(Air, Ionized)

L 13595-63 EWT(1)/FCC(w)/BDS/ES(v)/EEC-2/ES(w)-2 AFFTC/ASD/ESD-3/SSD
Pe-4/Pab-4 GW
ACCESSION NR: AP3004330 S/0033/63/040/004/0733/0741 70

AUTHOR: Furman, A. M.

TITLE: On the theory of ionization of meteor trails. III. Ionization caused by molecules reflected from meteoric matter and air atoms

SOURCE: Astronomicheskiy zhurnal, v. 40, no. 4, 1963, 733-741

TOPIC TAGS: meteor, meteor trail, meteoric ionization, meteoric particle

ABSTRACT: An investigation is made of a suggested ionization mechanism occurring in the vicinity of meteors, in which air atoms or molecules (principally nitrogen) bounce off meteoric particles with sufficient velocity to cause ionization of other air molecules. Quantitative expressions are obtained for several factors governing such a process, including linear ionization density along the meteor trail, flux density and velocity of reflected air molecules, and the effective ionization cross section during the rebound time. The case is considered for both atomic and molecular oxygen and nitrogen, and it is shown that their rebound velocities can be as much as 1.4—1.7 times the particle velocity at impact, depending on whether stone or iron particles are assumed. The probability of ionization being induced by the rebounding molecule is analyzed. The present

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L 13595-63
ACCESSION NR: AP3004330

wide disagreement as to its proper expression is suggested to be due to the fact that this probability until now has been considered as being independent of rebound velocity; the author postulates instead a strong dependence on velocity. A lower limit of meteor velocity is deduced, below which the ionization in question will not take place; for stone particles striking N_2 this is found to be 35 km/sec, and for iron particles striking O_2, about 30 km/sec. It is concluded that ionization of the type described is several orders less effective than ionization from atoms of vaporized meteor particles; in fact its contribution to overall ionization in the meteor trail can be neglected. Orig. art. has: 1 figure, 1 table, and 18 formulas.

ASSOCIATION: none

SUBMITTED: 19Nov62 DATE ACQ: 20Aug63 ENCL: 00

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Card 2/2

FURMAN, I.Ya., dotsent (Voronezh); TUMMEL', V.S., inzh.(Voronezh); FURMAN, A.M., inzh. (Voronezh)

Increasing the yield of water wells by torpedoing. Gidr. i mel. 16 no.1: 53-56 Ja '64. (MIRA 17:2)

L 07361-67 EWT(1) GW
ACC NR: AP6033171 SOURCE CODE: UR/0033/66/043/005/1052/1063

AUTHOR: Furman, A. M.

ORG: none

4/9
B

TITLE: Theory of ionization of meteor trails. IV. Efficiency of meteor trail ionization by collision of meteoric vapor particles with air molecules

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 5, 1966, 1052-1063

TOPIC TAGS: meteor trail, ionization phenomenon, particle collision, ionization cross section, radar meteor observation

ABSTRACT: The contribution of meteoric vapor-particle collision with air molecules to the ionization of meteor trails was estimated based on recent experimental data on ionization cross sections as applied to meteoric materials (iron, calcium, potassium, silicon, magnesium, sodium, oxygen) at meteor velocities (40 km/sec). The values thus obtained for ionization probability are 20-200 times smaller than those for ionization in meteor trails as determined from radar observations. This contradicts the basis of the Opik-Herlofson theory that fast particle collision with air molecules is the cause of ionization in meteor trails. This ionization mechanism cannot explain the linear ionization density observed by radar methods nor the ionized trails formed by meteors travelling at velocities below 25-30 km/sec since the energies of the atoms at such

UDC: 523.57

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velocities are below the ionization thresholds of atoms of meteoric materials and of air molecules. Assumption of the simultaneous action of several ionization mechanisms is offered to eliminate these contradictions and to help provide for the deficiency of the ion and electron recombination process in generating visible radiation in meteor trails and to explain the existence of stable ionized meteor trails. Some of the possible ionization mechanisms previously proposed by the author and by others, and the need for their refinement, are discussed. Orig. art. has: 8 formulas, 3 tables, and 4 figures.

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TSELISHCHEV, S.P.; FURMAN, A.O.

Absorption of radiation in volumes of substance containing radioactive isotopes [with summary in English]. Izv. TSKhA no.3:110-115 '57. (MIRA 11:3)
(Plants, Effect of radioactivity on)

FURMAN, A.O.

TSELISHCHEV, S.P.; FURMAN, A.O.

Absorption of beta-radiation in thin layers of substance and their role in the absolute measurement of beta-activity [with summary in English]. Izv. TSKhA no.3:116-130 '57. (MIRA 11:3)
(Beta rays)